REMARKS

Claims 8, 9, 13 and 14 have been previously withdrawn from the present application, and therefore claims 1-7 and 10-12 are currently pending in the present application.

Applicants gratefully acknowledge the Examiner's indication that claims 3-7 have been allowed.

Claims 1, 2 and 10-12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,289,278 to Endo et al. ("Endo"). Applicants respectfully submit that the anticipation rejection should be withdrawn for at least the following reasons.

To anticipate a claim under § 102(b), a single prior art reference must identically disclose each and every claim element. See Lindeman Machinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984). If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997). Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claim invention, arranged exactly as in the claim. Lindeman, 703 F.2d 1458 (Emphasis added). Additionally, not only must each of the claim limitations be identically disclosed, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the inventions of the rejected claims, as discussed above. See Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 1 recites, in relevant parts, "determining a first inter-vehicle distance between the moving vehicle and a second vehicle **based on GPS measurements obtained at both vehicles**"; "**independently determining a second inter-vehicle distance based on relative motion** of the moving vehicle and the second vehicle **obtained using INS sensors at both vehicles**"; "comparing the first and second inter-vehicle distances"; and "confirming the integrity of the GPS measurements as a function of whether the first and second inter-vehicle distances are substantially equivalent." Claim 2 recites substantially similar limitations as

those of claim 1 recited above. Claim 10 recites, in relevant parts, "means for receiving GPS signals and for determining a GPS pseudo range of the vehicle"; "a processor capable of determining a first inter-vehicle distance between the vehicle and the second vehicle based on the pseudo range of the vehicle and on **GPS measurements communicated from the second vehicle**"; and "wherein the processor determines a second inter-vehicle distance based on the relative motion of the first vehicle and on **a relative motion of the second vehicle detected using an INS system of the second vehicle and communicated from the second vehicle**."

In support of the anticipation rejection, the Examiner contends col. 8, l. 9-26 of Endo disclose "a plurality of sensors for position detection in the moving body navigation device including INS sensors," and "comparing the first and second inter-vehicle distances; and confirming the integrity of the GPS measurements as a function of whether the first and second inter-vehicle distances are substantially equivalent." Applicants submit that the actual disclosure of Endo does not teach or suggest the claimed features, as explained in detail below.

First, in contrast to the Applicants' claimed invention, which requires "determining a second inter-vehicle distance **based on relative motion** of the moving vehicle and the second vehicle **obtained using INS sensors at both vehicles**," nothing in Endo teaches that any inter-vehicle distance is determined based on information **obtained using INS sensors at both vehicles**, i.e., the host vehicle and the target vehicle. In fact, col. 8, l. 9-26 of Endo merely describes the components of the moving body navigation device of the **controlled (host) car** (see Fig. 8), but there is simply no mention of any involvement of INS sensors (or information from such INS sensors) of **a target vehicle**. Endo simply has nothing to do with "determining a second inter-vehicle distance **based on relative motion** of the moving vehicle and the second vehicle **obtained using INS sensors at both vehicles**," as recited in claim 1, and as similarly recited in claims 2 and 10.

In addition to, and independent of, the above, Endo does not teach **independently determining** a first inter-vehicle distance between two vehicles (based on GPS measurements obtained **at both vehicles**) and a second inter-vehicle distance (based on relative motion of the two vehicles **obtained using INS sensors at both vehicles**), and confirming the integrity of the GPS measurements based on the comparison of the two

independently determined distance measurements. The cited sections of Endo, i.e., col. 8, l. 9-26 and 66-68, and col. 9, l. 1-19, simply do not teach or suggest independently determining two separate inter-vehicle distances, let alone teach or suggest determining the inter-vehicle distances based on information obtained at both the controlled (host) vehicle and the target vehicle.

For at least these reasons, it is respectfully submitted that Endo does not anticipate claims 1, 2 and 10, as well as claims 11 and 12 which depend from claim 10. Withdrawal of the anticipation rejection of claims 1, 2 and 10-12 is therefore respectfully requested.

CONCLUSION

In view of all the above, it is believed that the pending claims in allowable condition. It is therefore respectfully requested that the rejections be reconsidered and withdrawn, and that the present application issue as early as possible.

The Office is authorized to charge the $450 fee for the two-month extension of time to respond to the October 21, 2005 Office Action to Kenyon & Kenyon LLP's Deposit Account No. 11-0600.

Respectfully submitted,

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(R. No. 36,197)

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CUSTOMER NO. 26646

Listing of Claims:

1. (Original) A method for checking the integrity of GPS measurements for a moving vehicle comprising:

determining a first inter-vehicle distance between the moving vehicle and a second vehicle based on GPS measurements obtained at both vehicles;

independently determining a second inter-vehicle distance based on relative motion of the moving vehicle and the second vehicle obtained using INS sensors at both vehicles;

comparing the first and second inter-vehicle distances; and

confirming the integrity of the GPS measurements as a function of whether the first and second inter-vehicle distances are substantially equivalent.

2. (Previously Presented) A method for checking the integrity of GPS measurements for a moving vehicle comprising:

determining a first inter-vehicle distance between the moving vehicle and a second vehicle based on GPS measurements obtained at both vehicles;

independently determining a second inter-vehicle distance based on relative motion of the moving vehicle and the second vehicle obtained using INS sensors at both vehicles;

comparing the first and second inter-vehicle distances; and

confirming the integrity of the GPS measurements as a function of whether the first and second inter-vehicle distances are substantially equivalent;

wherein the step of determining a first inter-vehicle distance includes:

obtaining a first set of GPS measurements at the moving vehicle;

obtaining a second set of GPS measurements at the second vehicle; and

mutually communicating the first and second sets of GPS measurements to the respective second vehicle and moving vehicle.

3. (Original) A method of detecting an error at a particular vehicle by communicating GPS data among multiple vehicles within a given vicinity, the method comprising:

generating test series data at each vehicle for each pair of vehicles receiving GPS signals from a satellite, the test series data for each pair comprising a difference between a first inter-vehicle distance between the pair of vehicle calculated based on GPS data and a second inter-vehicle distance independently calculated based on INS sensors in each of the pair of vehicles;

identifying which test series data have values greater than a threshold, indicating an error; and

if an error is indicated, determining which of the multiple vehicles the error occurs in by comparing the test series data generated at each vehicle.

4. (Previously Presented) A method of detecting an error at a particular vehicle by communicating GPS data among multiple vehicles within a given vicinity, the method comprising:

generating test series data at each vehicle for each pair of vehicles receiving GPS signals from a satellite, the test series data for each pair comprising a difference between a first inter-vehicle distance between the pair of vehicle calculated based on GPS data and a second inter-vehicle distance independently calculated based on INS sensors in each of the pair of vehicles;

identifying which test series data have values greater than a threshold, indicating an error;

if an error is indicated, determining which of the multiple vehicles the error occurs in by comparing the test series data generated at each vehicle; and

detecting an error at a particular vehicle if a particular vehicle has errors in all test series it generates with respect to a particular satellite, and the other of the multiple vehicles show an error in only test series pertinent to the particular vehicle with respect to the particular satellite.

5. (Original) The method of claim 4, further comprising:

waiting for a suitable period;

determining whether the error still exists at the particular vehicle; and

if after the suitable period has elapsed the same error still exists, identifying the error as a receiver error.

6. (Original) The method of claim 5, further comprising:

if during the suitable period, the error changes in magnitude or no longer exists, identifying the error as a GPS multipath error.

7. (Original) The method of claim 6, further comprising:

identifying a magnitude of the error as a level of GPS multipath at a location of the particular vehicle;

obtaining a satellite constellation at a time the error is detected; and

associating the level of GPS multipath with the location and the satellite constellation.

8. (Withdrawn) A method of mapping GPS multipath levels at each point in a vicinity for an entire range of satellite constellations, comprising:

a) detecting a GPS multipath error at a particular point in the vicinity for a satellite constellation using multiple roving GPS receivers;

b) recording the multipath error as a GPS multipath level for the particular point and the satellite constellation; and

c) repeating steps a) and b) for all other points in the vicinity and at different times to capture the entire range of satellite constellations.

9. (Withdrawn) The method of claim 8, wherein each of the multiple roving GPS receivers generates test series data for each pair of the roving receivers obtaining signals from a same GPS satellite, the test series data for each pair comprising a difference between a first inter-vehicle distance between the pair calculated based on GPS data, and a second inter-vehicle distance independently calculated based on INS sensors in each of the pair of vehicles.

10. (Previously Presented) A system provided in a vehicle for checking the integrity of GPS measurements for a moving vehicle comprising:

means for receiving GPS signals and for determining a GPS pseudo range of the vehicle;

means for communicating with a second vehicle within a vicinity of the vehicle;

a processor capable of determining a first inter-vehicle distance between the vehicle and the second vehicle based on the pseudo range of the vehicle and on GPS measurements communicated from the second vehicle; and

an INS system including inertial sensors, the INS system providing information allowing the processor to determine a relative motion of the first vehicle;

wherein the processor determines a second inter-vehicle distance based on the relative motion of the first vehicle and on a relative motion of the second vehicle detected using an INS system of the second vehicle and communicated from the second vehicle, and compares the first and second inter-vehicle distances, the integrity of the GPS measurements being

determined as a function of whether the first and second inter-vehicle distances are substantially equivalent.

11. (Original) The system of claim 10, wherein the means for communicating with a second vehicle includes a wireless communication device.

12. (Original) The system of claim 11, wherein the vicinity includes an area within a radius of 10 kilometers of the vehicle.

13. (Withdrawn) A system for providing a mapping of GPS multipath levels at each point in a vicinity for an entire range of satellite constellations, comprising:

a central information depository; and

multiple roving GPS receivers including means for detecting a GPS multipath error at a particular point in the vicinity for a particular satellite constellation;

wherein the multipath error is recorded as a GPS multipath level for the particular point and satellite constellation at the central information depository;

and wherein the detection of multipath error is repeated for all other points in the vicinity and at different times to capture the entire range of satellite constellations, the multipath errors being stored at the central information depository.

14. (Withdrawn) The system of claim 13, wherein the central information depository includes means for receiving wireless data signals, and the multiple roving GPS receivers are equipped with means for wirelessly transmitting GPS multipath errors as a data signal to the central information depository.